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Curricular Determinants of a Global Attitude Toward an MIS Program

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Abstract

The purpose of this study was to determine which, if any, course evaluations are drivers of alumni global attitudes toward an MIS program.

Background

There are many methods of determining alumni attitudes toward an MIS program and its individual courses. One approach recommended by Van Auken (4) and used by Gasen et al. (1) is asking students to evaluate various aspects of the MIS program. Gasen's study was primarily focused on the satisfaction students perceived with the entire MIS program and did not address the content value of individual courses. A questionnaire proposed by Hanchey (2) also does not allow analysis regarding specific course content. While the concept of a "global attitude" has been the subject of research in the field of marketing, notably by Mitchell and Olson (3), the application of this concept to graduates' perceptions of an educational program does not appear in the literature.

Purpose of the Study

The objectives of this research were to determine:

1. Graduates' perceived content value of each of a set of required courses in an MIS program;
2. If there appears to be an underlying factor to which an evaluation of the MIS program is related; and
3. If an underlying factor to which an evaluation of the MIS program is related can be discovered, the extent to which each required course evaluation is correlated to that fact.

Methodology

Persons who had graduated from the MIS program at California State University, Chico, from 1987 to 1995 were asked to rate the value of the course content of each required and elective course from extremely weak, with a value of 1, to extremely strong, with a value of 6. They were also asked to evaluate the entire MIS program on a series of semantic differential adjectives, such as Good Experience – Bad Experience, Challenging – Boring, and Valuable – Valueless. A principal components factor analysis with Varimax rotation was then used to determine the structure of the data. If a global attitude emerged, the factor score for each individual on that attitude would then be used, along with the person's evaluation score for each course, to determine which, if any, courses exhibited a strong positive correlation between the global attitude or factor score and one's evaluation of individual courses. In that manner, one could determine which courses appeared to be contributing to the overall attitude one had toward the MIS program as a whole.

Findings

Factor Analysis of Global Attitude Toward the MIS Program

The factor analysis revealed that only one factor was present and the items shown in Table 1 had the factor loadings shown. The Cronbach alpha for the items was .9245, thereby indicating a very high level of internal consistency of the responses to the items. Also, the factor explained 71.4% of the variance in semantic differential scores.

Analysis of Course Content Value Scores

This factor score, global attitude or MIS program perception index, for each graduate was then matched to the subject's evaluation of the content of each required course and a Pearson product moment correlation analysis was conducted. This method was appropriate since (1) the Lickert scale scores have traditionally been viewed as acceptable in lieu of equal interval measurements in perception-based and opinion-based research and (2) the requirement for reasonable power of a sample size of five times the number of independent variables was met in most cases. The results are shown in Table 2.

Table 1. Semantic Differentials and Their Factor Loadings

Scale Item	Factor Loading
Good Experience – Bad Experience	.67448
Good Use of My Time – Bad Use of My Time	.82859
Valuable – Valueless	.78144
Useful – Useless	.77598
Desirable – Undesirable	.80548
Effective – Ineffective	.81820

Table 2. Correlation of Course Evaluation Scores and Global Attitude Score

Course Title	Correlation Coefficient	Probability	Sample Size
Business Information Systems and Organizations	.4528	.005	31
COBOL Language Programming	.1643	.111	57
Accounting Information Systems	-.0159	.454	58
Structured Systems Analysis	.3898	.001	58
Software Project Management	.3358	.005	58
Data Base Concepts	.2917	.013	58
Information Center Administration	.2833	.019	54
Systems Development Practicum	.4088	.001	55

As shown, only the COBOL Language Programming and Accounting Information Systems courses were perceived in a neutral manner, all other core MIS course content evaluation scores were strongly positively related to the global attitude of graduates to the MIS program. Next a multiple regression analysis was performed with the global attitude score serving as the dependent variable and the course content value scores serving as the independent variables. This analysis produced the values shown in Table 3 and was conducted to determine how each independent variable performed in the presence of the other independent variables. In this analysis, the Information Center Administration course evaluation shows the greatest impact on one's global attitude toward the MIS program.

Table 3. Multiple Regression of Course Content Evaluation Scores on Global Attitude Scores

Course Title	Beta Coefficient	Beta Weight	T Value
Business Information Systems and Organizations	.29300	.44122	-1.254
COBOL Language Programming	.13564	.30117	1.310
Accounting Information Systems	-.11353	.17196	-.956
Structured Systems Analysis	.25971	.28386	1.901
Software Project Management	-.18492	-.26575	-1.060
Data Base Concepts	.01189	.01610	.061
Information Center Administration	.40466	.48231	2.286
Systems Development Practicum	-.19957	-.29117	-1.254

Summary and Conclusions

Using several subjective adjectives in a semantic differential scaling, it was possible to develop a global attitude factor toward an MIS program. By using a factor analysis score for each graduate and each graduate's score of the value of the course content of required MIS courses, it was found that only the COBOL Language Programming and Accounting Information Systems courses, both taught by non-MIS area faculty, were not strongly correlated to a graduate's global attitude toward the MIS program. It is possible that the frame of reference of those teaching those courses, i.e., Computer Science and Accounting, respectively, colored the opinions of MIS students.

A multiple regression analysis of course evaluation scores against the global attitude scores of graduates found that the course with the strongest positive relationship with the global attitude was Information Center Administration, the non-technical management capstone course of the MIS program. It is suggested that students who saw themselves as future MIS management personnel both highly valued this capstone course and had a positive attitude about the MIS program, whereas those with a strong technical orientation placed a lower value on this course and the entire MIS program.

The results suggest that this type of research can identify courses that influence the overall attitude of students toward an MIS degree program. If an MIS faculty discovered that a course was negatively correlated to students' global attitude toward the program, the course can be examined to determine what characteristics of the course are contributing to the negative correlation. By the same token, if an MIS faculty identified a course with an exceptionally strong positive correlation with a global attitude toward the program, the characteristics of the course could be analyzed to determine which characteristics are transferable to other courses in the program.

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